

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 Claim 1 (currently amended): Method for identifying a
2 momentary acoustic scene, said method including
3 - an extraction, during an extraction phase, of
4 characteristic features from an acoustic signal
5 captured by at least one microphone (2a, 2b),
6 wherein at least auditory-based characteristics are
7 identified and
8 - an identification, during an identification phase, of
9 the momentary acoustic scene on the basis of the
10 extracted characteristics, and
11 - selecting and executing a suitable process from a
12 plurality of available processes based on the
13 identified momentary acoustic scene.
14 ~~wherein at least auditory based characteristics are~~
15 ~~identified during the extraction phase.~~

1 Claim 2 (previously amended): Method as in claim 1,
2 wherein, for the identification of the characteristic features
3 during the extraction phase, Auditory Scene Analysis (ASA)
4 techniques are employed.

1 Claim 3 (previously amended): Method as in claim 1,
2 wherein, during the identification phase, Hidden Markov Model
3 (HMM) techniques are employed for the identification of the
4 momentary acoustic scene.

1 Claim 4 (previously amended): Method as in claim 1,
2 wherein at least one of the following auditory characteristics
3 are identified during the extraction of said characteristic
4 features: loudness, spectral pattern, harmonic structure,

5 common build-up and decay processes, coherent amplitude
6 modulations, coherent frequency modulations, coherent
7 frequency transitions and binaural effects.

1 Claim 5 (currently amended:) Method as in claim 1,
2 wherein ~~any other suitable~~ at least one non-auditory
3 ~~characteristics are~~ is identified in addition to the auditory
4 characteristics.

1 Claim 6 (currently amended): Method as claim 1, wherein
2 the auditory ~~and any other~~ characteristics are grouped along
3 Gestalt theory principles.

1 Claim 7 (currently amended): Method as in claim 6,
2 wherein the extraction of characteristics and/or the grouping
3 of the characteristics are performed either in context-free or
4 in context-sensitive fashion, and further including the step
5 of taking into account additional information or hypotheses
6 relative to a signal content and thus providing to thereby
7 provide an adaptation to the acoustic scene.

1 Claim 8 (previously amended): Method as in claim 1,
2 wherein, during the identification phase, data are accessed
3 which were acquired in an off-line training phase.

1 Claims 9-18 (withdrawn).

1 Claim 19 (new): A method for identifying and selecting an
2 appropriate process for analyzing an acoustic signal, said
3 method including

4 - an extraction, during an extraction phase, of
5 characteristic features from said acoustic signal,
6 wherein at least auditory-based characteristics are
7 identified;

- 8 - an identification, during an identification phase, of a
9 momentary acoustic scene on the basis of the
10 extracted characteristics;
11 - selecting a suitable process for analyzing the acoustic
12 signal based on the identified momentary acoustic
13 scene, wherein said suitable process is chosen from
14 a plurality of available processes; and
15 - executing said selected suitable process to generate a
16 processed acoustic signal.

1 Claim 20 (new): The process of claim 19, wherein said
2 extraction includes the step of analyzing the acoustic
3 structure of the acoustic signal for identifying tonal signals
4 in acoustical signals generated by speech and tonal signals
5 generated by music.

1 Claim 21 (new): The process of claim 19, wherein said
2 extraction applies the principles of gestalt analysis for
3 acoustical signals generated by speech and tonal signals
4 generated by music.

1 Claim 22 (new): The process of claim 21, wherein said
2 gestalt analysis includes examining a qualitative property
3 chosen from the group consisting of continuity, proximity,
4 similarity, common density, unit, and good constancy.

1 Claim 23 (new): The process of claim 19, wherein said
2 executing said selected suitable process includes the step of
3 processing said acoustic signal to generate a hearing signal
4 for improving the hearing ability of a user.

1 Claim 24 (new): The process of claim 19 further including
2 the step of generating an audio signal from said processed
3 acoustic signal for transmission to a user.

4 Claim 25 (new): A method for identifying and selecting an
5 appropriate process for analyzing an acoustic signal, said
6 method including

- 7 - an extraction, during an extraction phase, of
8 characteristic features from said acoustic signal
9 including the step of analyzing the acoustic
10 structure of the acoustic signal for identifying
11 tonal signals in acoustical signals generated by
12 speech and tonal signals generated by music, wherein
13 at least auditory-based characteristics are
14 identified; and
15 - an identification, during an identification phase, of a
16 momentary acoustic scene on the basis of the
17 extracted characteristics, wherein said
18 identification includes the use of hidden markov
19 models; and
20 - selecting a suitable process for analyzing the acoustic
21 signal based on the identified momentary acoustic
22 scene, wherein said suitable process is chosen from
23 a plurality of available processes for improving the
24 hearing ability of a user;
25 - executing said selected suitable process, said
26 executing including the step of processing said
27 acoustic signal to generate a processed audio
28 signal; and
29 - generating an audio signal from said processed acoustic
30 signal for transmission to said user.